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J. McCLOSKEY & H. J. GRAY.

SYRUP DISPENSING APPARATUS.

APPLICATION FILED OCT. 8, 1906.

Fig. I.

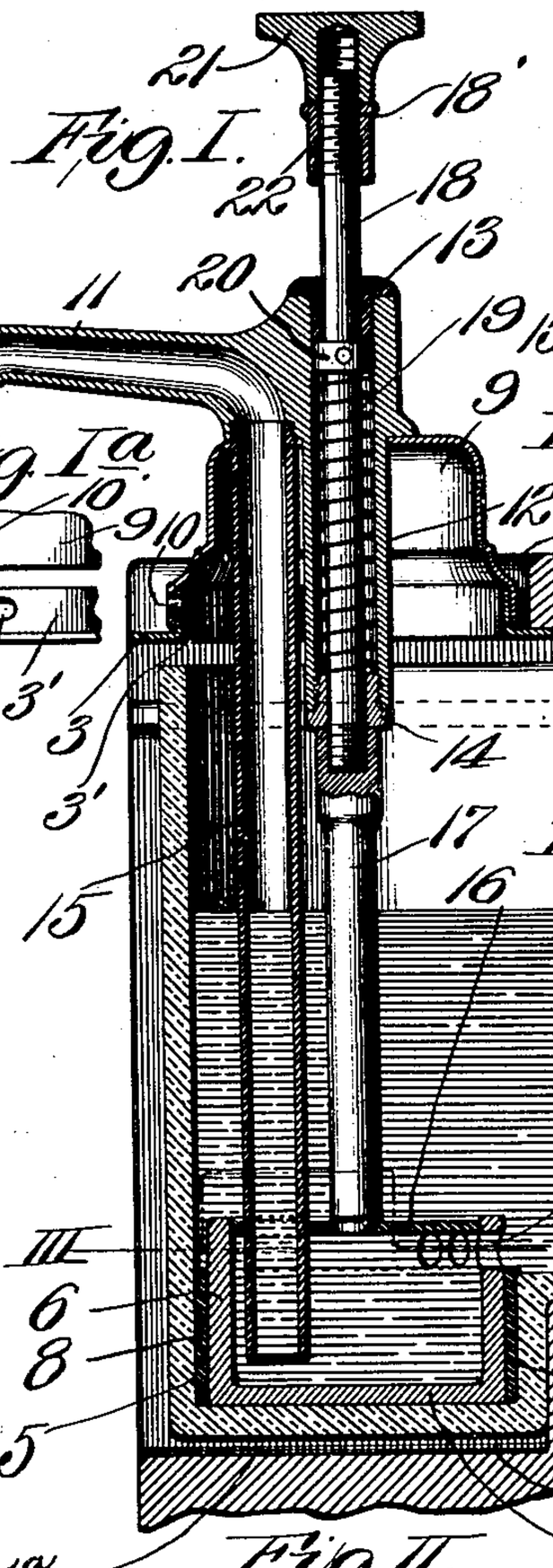


Fig. III.

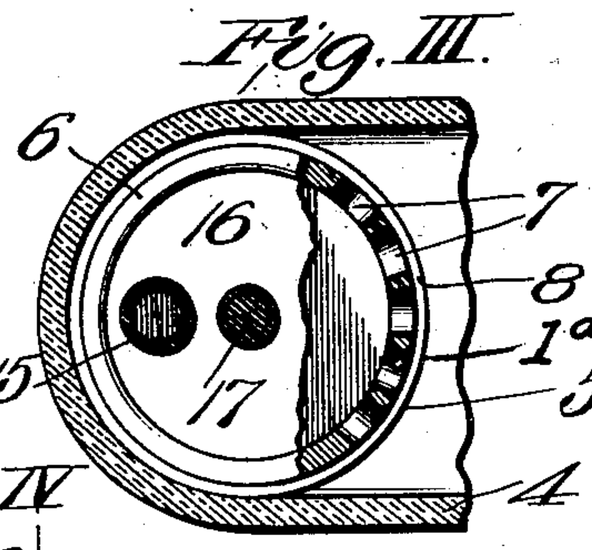


Fig. Ia.

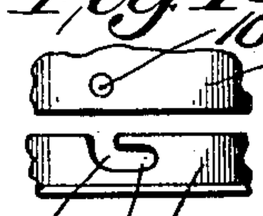


Fig. II.

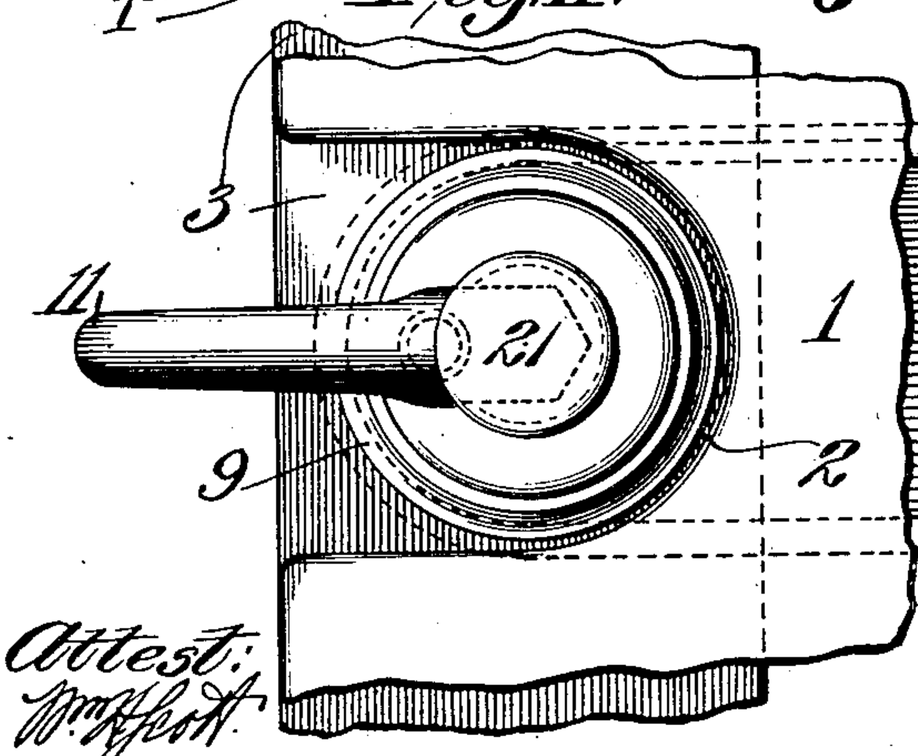
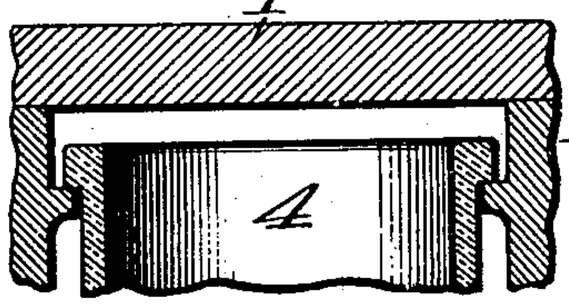


Fig. IV.



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SYRUP-DISPENSING APPARATUS.

No. 886,720. Specification of Letters Patent. Patented May 5, 1908.

Application filed October 8, 1906. Serial No. 337,939.

To all whom it may concern:

Be it known that we, JOHN MCCLOSKEY and HERRICK J. GRAY, citizens of the United States of America, residing at the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Syrup-Dispensing Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to a syrup dispensing apparatus having a pump for drawing syrup from jars used at soda water fountains and the invention has for its object to provide an apparatus having a pump construction in which the nozzle remains in a stationary position when the pump is operated, thereby avoiding liability of breakage of the tumblers held to receive the syrup discharged thereinto by the pump, as distinguished from other pumps made for like use in which the nozzle is a movable member and has a rise and fall motion during the operation of the pump plunger, and therefore moves downwardly to the tumbler held beneath it when the syrup is being drawn.

A further object of our invention is to provide an adjustment in the pump exterior of the syrup jar by which the degree of movement of the pump plunger may be regulated without the necessity of removing the pump from the jar and without handling portions of the pump which are exposed to the syrup and are therefore disagreeable parts to handle without thoroughly removing the syrup therefrom.

A further object of our invention is to construct parts of the pump which enter into the syrup of material which is unsusceptible to corrosion when in contact with the syrup and of such nature that it will not taint the syrup so as to cause the syrup to be injurious in any way to the health of persons who partake of the syrup.

Figure I is a vertical section taken through a portion of a soda-water fountain counter, a syrup jar therein and our pump shown in operative position in said jar. Fig. I^a is an elevation of fragments of the flanged pump supporting plate seated in the counter and the cap of the pump that is connected to said plate. Fig. II is a top or plan view of the parts shown in Fig. I, the counter being partly broken away. Fig. III is a horizontal section taken on line III—III, Fig. I. Fig. IV is a vertical section taken on line IV—IV, Fig. I.

1 designates a counter which is preferably cut out at the top to form a recess 2 at which is located a pump supporting plate 3 having an upwardly extending flange 3′. 4 is a jar horizontally arranged that is seated in the counter 1 and is provided with a well 5 located at its forward end and occupying a pocket 1^a in the counter therebeneath.

6 designates a cup seated in the well of the jar 4 and in which are radial orifices or openings 7 located at the top of the well in the wall thereof where it projects above the bottom of the jar so as to permit flow of syrup from the main portion of the jar to said cup. The cup is preferably surrounded by packing 8, so as to completely fill the space between the wall of the well and the wall of the cup and securely hold the latter from being lifted by the suction of the plunger.

9 designates a cap that is mounted on the supporting plate 3 and provided with an inwardly projecting stud 10 (see Figs. I and I^a) adapted to enter a bayonet slot 3^a in the upwardly extending flange 3′ of the supporting plate in order that the cap may be detachably held to said supporting plate.

11 designates the nozzle of my pump formed integral with the stationary head of the pump which is permanently seated on and fastened to the cap 9 and is therefore immovable when said cap is attached to the supporting plate 3 and the pump is in use. At the rear of the nozzle and extending through the head of the pump, and, as shown, in one piece therewith is a vertically disposed depending barrel 12 in the upper end of which is seated a nut 13 and in the lower end of which is seated a nut 14.

15 is a discharge tube that is attached at its upper end to the nozzle 11 so that it has communication with the duct through said nozzle. The lower end of this discharge tube extends into the cup 6 in the syrup jar in order that it may receive the syrup to conduct it to said nozzle.

16 designates a plunger that is snugly fitted in the syrup receiving cup 6 to operate therein and in which is an aperture through which the discharge tube 15 passes in order that the plunger may operate around said tube.

17 is a plunger rod that is stepped into and carries the plunger 16 and which extends up-

wardly from the plunger to a point adjacent to the lower end of the nozzle barrel 12.

18 is a push stem that extends vertically through the barrel and to the lower end of which the plunger rod 17 is detachably connected, preferably through the medium of screw thread engagement with the head of said stem. The push stem is located in the barrel and slidably fitted in the nuts 13 and 14 in the ends of the barrel and it is surrounded by a lift spring 19 that rests upon the lower nut 14 and is adapted to act against a collar 20 fixed to said stem. The push stem is provided at its upper end with a screw thread 18′ (see Fig. I).

21 is a push knob that is screw threaded internally and fitted to the thread of the push stem, in order that it may be adjusted on said stem.

22 is an adjustment nut that is fitted to the threaded upper end of the push stem beneath the push knob and against which said push knob is adapted to bear. This adjustment nut serves to limit the downward thrust of the push stem and consequently of the plunger 16 connected to the stem by the plunger rod, the limitation of movement being due to the abutting of the adjustment nut against a stationary part of the pump head, for instance the nut 13 at the upper end of the barrel and the adjustment nut may be readily and instantly adjusted to any desired degree so that it will abut against the stationary part of the pump head upon either a greater or less degree of thrust of the stem to which it is applied. By regulating the degree of thrust of the stem we provide for a desired degree of movement of the plunger 16 in the syrup receiving cup 6 in order that any desirable amount of syrup may be discharged through the nozzle 11 when the plunger is moved downwardly in the cup against the syrup therein and acts to force the syrup through the discharge tube 5 and the nozzle 11 with which said discharge tube has communication. It should also be noted that the adjustment nut 22 serves as a jam nut for the push knob 21.

The discharge tube 15 and the plunger 16 and its rod 17 of our pump are all constructed of hard rubber, a non-corrodible substance and one which will not taint the syrup to be drawn through the medium of the pump and from which no injurious action upon the syrup can be transmitted.

We claim:—

1. A syrup dispensing apparatus comprising a cup providing a plunger chamber, a pump supporting plate having an upwardly extending flange provided with a bayonet slot, a cap provided with an inwardly projecting stud engaging the bayonet slot, a pump head having a nozzle and a depending barrel and supported on the cap, a push stem operating in the barrel, a plunger rod connected with the push stem, and provided with a plunger adapted to operate in the cup, and a discharge tube leading from the cup to the nozzle.

2. A syrup dispensing apparatus comprising a cup providing a plunger-chamber, a pump supporting plate having an upwardly extending flange, a cap fitting on the pump supporting plate, a pump head having a nozzle and a depending barrel and supported on the cap, upper and lower nuts secured to the upper and lower ends of the barrel, respectively, a push stem having a collar and operating in the barrel, a lift spring surrounding the push stem between the lower nut and the collar, a plunger rod connected with the push stem, and provided with a plunger adapted to operate in the cup, and a discharge tube leading from the cup to the nozzle.

3. A syrup dispensing apparatus comprising a cup providing a plunger-chamber, a pump supporting plate having an upwardly extending flange, a cap fitting on the pump supporting plate, a pump head having a nozzle and a depending barrel and supported on the cap, upper and lower nuts secured to the upper and lower ends of the barrel, respectively, a push stem having a collar and operating in the barrel, a combined adjustment and jam-nut on the upper end of the push stem, an adjustable push knob secured to the extremity of the push stem above the combined adjustment and jam-nut, a lift spring surrounding the push stem between the lower nut and the collar, a plunger rod connected with the push stem, and provided with a plunger adapted to operate in the cup, and a discharge tube leading from the cup to the nozzle.

JOHN McCLOSKEY.
HERRICK J. GRAY.

In presence of—
E. S. KNIGHT,
BLANCHE HOGAN.